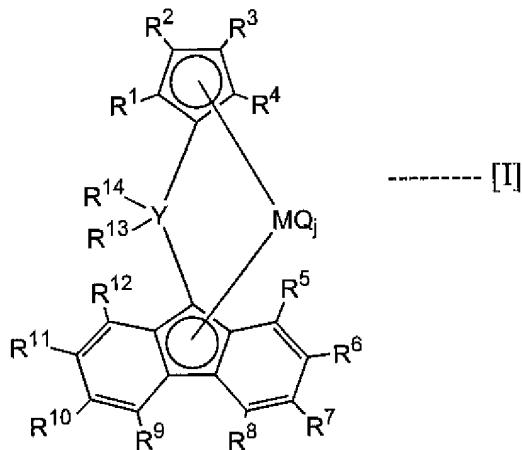


AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A process for producing an olefin polymer, comprising:
characterized by
carrying out solution polymerization of ethylene and one or more kinds of monomers selected from α -olefins at a temperature ranging from 120 to 300°C, in the presence of a catalyst for olefin polymerization, said catalyst consisting essentially of: composed of:
(A) a bridged metallocene compound represented by a general formula [I] described below, and
~~(B) at least one or more kinds of compounds selected from the group consisting of~~
~~(b-1) an organoaluminum oxy compound,~~
~~(b-2) a compound which forms an ion pair in a reaction with the bridged metallocene compound (A), and~~
~~(b-3) an organoaluminum compound,~~



(wherein R¹, R², R³, R⁴, R⁵, R⁸, R⁹, and R¹² are each selected from a hydrogen atom, a hydrocarbon group, and or a silicon-containing group, and may be identical or different, or neighboring groups may be bonded together combined to form a ring structure; -

R⁶ and R¹¹ are each identical to each other atoms or identical groups selected from and are each a hydrogen atom, a hydrocarbon group, and or a silicon-containing group, or and may be bonded together combined to form a ring structure;

R⁷ and R¹⁰ are each identical to each other atoms or identical groups selected from and are a hydrogen atom, a hydrocarbon group, and or a silicon-containing group, or and may be bonded together combined to form a ring structure;

R⁶, R⁷, R¹⁰ and R¹¹ are not simultaneously hydrogen atoms; -

R¹³ and R¹⁴ are each an aryl group, and may be identical or different;

M represents Ti, Zr or Hf, and is preferably Zr or Hf;

Y represents carbon or silicon;

Q represents halogen, a hydrocarbon group, an anionic ligand, or a lone electron pair, and may be selected from in an identical or different combination of neutral ligands capable of coordination; and

j is an integer of 1 to 4, and .)

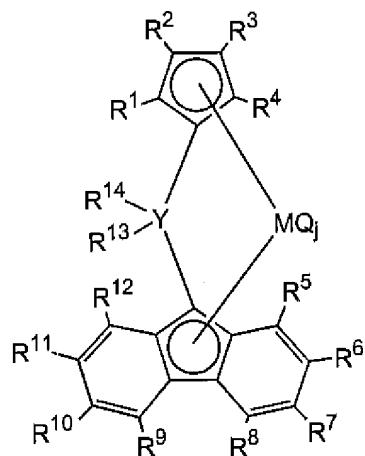
(B) at least one or more kinds of compounds selected from the group consisting of

(b-1) an organoaluminum oxy-compound, and

(b-3) an organoaluminum compound.

2. (Canceled)

3. (New) A process for producing an olefin polymer, comprising:
carrying out solution polymerization of ethylene and one or more kinds of monomers
selected from α -olefins at a temperature ranging from 120 to 300°C, in the presence of a catalyst
for olefin polymerization, said catalyst comprising:
(A) a bridged metallocene compound represented by the general formula [I] described
below,



wherein R¹, R², R³, R⁴, R⁵, R⁸, R⁹ and R¹² are each a hydrogen atom, a hydrocarbon group, or a silicon-containing group, and may be identical or different, or neighboring groups may be bonded together to form a ring structure;

R⁶ and R¹¹ are identical and are each a hydrocarbon group or a silicon-containing group, or may be bonded together to form a ring structure;

R⁷ and R¹⁰ are identical to each other and are each a hydrocarbon group or a silicon-containing group, or may be bonded together to form a ring structure;

R^{13} and R^{14} are each an aryl group, and may be identical or different;

M is Ti, Zr or Hf;

Y represents carbon or silicon;

Q represents halogen, a hydrocarbon group, an anionic ligand, or a lone electron pair, and may be selected from an identical or different combination of neutral ligands capable of coordination; and

j is an integer of 1 to 4, and

(B) at least one compound selected from the group consisting of

(b-1) an organoaluminum oxy compound,

(b-2) a compound which reacts with the bridged metallocene compound (A) to form an ion pair, and

(b-3) an organoaluminum compound.

4. (New) The process of claims 1 or 3, wherein M represents Zr or Hf.